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## Studies on the species of Fanniinae (Diptera : Muscidae) from Japan. III.

### Description of *Piezura nigrigenus* sp. nov. and *Fannia japonica amamiensis* subsp. nov. and redescription of *Platycoenosia mikii* Strobl, 1894

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**Abstract:** A new species of the genus *Piezura*, *P. nigrigenus*, a new subspecies of the genus *Fannia*, *F. japonica amamiensis*, and a newly recorded species of the genus *Platycoenosia*, *P. mikii* Strobl are dealt with in this paper.

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#### INTRODUCTION

Hitherto two species of the genus *Piezura* were known in the world. One occurs in Europe, and another occurs in North America. One species of this genus was newly found from Japan, and is described. It is interesting that the Japanese species is rather closely allied to North American one than to the European one. A similar instance was represented in the case of *Fannia japonica* Nishida, 1974.

One new subspecies of *Fannia japonica* Nishida, 1974 is also described. This is the subspecies only found from Amami-Ôshima Is.

*Platycoenosia mikii* Strobl is newly recorded from Japan, and redescribed in this paper.

#### DESCRIPTION

##### *Piezura nigrigenus* sp. nov.

(Japanese name: Hana-iebae)

##### Male

*Head*: Eye bare, about twice as deep as long. Occipital setae short and regular in length, strong. Postoccipital setae absent.

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Four or five frontal setae present, with a few short and fine interstitials; upper orbital setae present. Frons at narrowest point about half as wide as width of an eye. Parafrontalia silvery pollinose but near vertex ash gray pollinose, ground color black. Frontal vitta black; brownish gray pollinose from certain angles; wide, at narrowest point about equal to width of ocellar triangle. Parafacialia black, reddish yellow partially; silvery pollinose; bare; narrow, at lunula about twice as wide as 3rd antennal segment. First and 2nd antennal segments, and basal portion of third segment reddish yellow; 1st segment with 1 or 2 short setulae; 2nd segment with 1 long setula among a few short setulae; 3rd segment about 2.8 times as long as wide. Arista short-plumose, the hairs about two-thirds as long as width of 3rd antennal segment; basal third to half reddish brown; basal fourth to fifth conspicuously thickened; about twice as long as 3rd antennal segment. Proboscis reddish yellow; theca weakly sclerotized, thinly pollinose. Palpi reddish yellow, compressed laterally.

*Thorax*: Ground color black, but humerus and ventral portion of sternopleuron reddish brown; brownish gray pollinose on dorsum, and grayish pollinose on humerus. A broad

present. *Prest acr* triserial; *post acr* quadriserial, median rows irregular and weaker. Anterior *prest dc* weak. *Pra* single, fine. *Stpl* 1+1+1, median one weak; with a few accessory setulae around them. Propleural depression bare; with 2 setae on ridge beneath, posterior one stronger. Prostigmatal setae 2, upper one stronger. Sctuellum black, but apical portion reddish brown; brownish gray pollinose. One pair of strong laterals and apicals present. Lateral sides and ventral surface bare.

**Wings:** Clear. Veins yellowish brown. Costal spine inconspicuous. Second anal vein weakly curved forward so as to intersect an extension of first anal vein at or just before margin of wing. Squamae pale yellow, with yellow fringe; lower one lobated. Halteres reddish yellow.

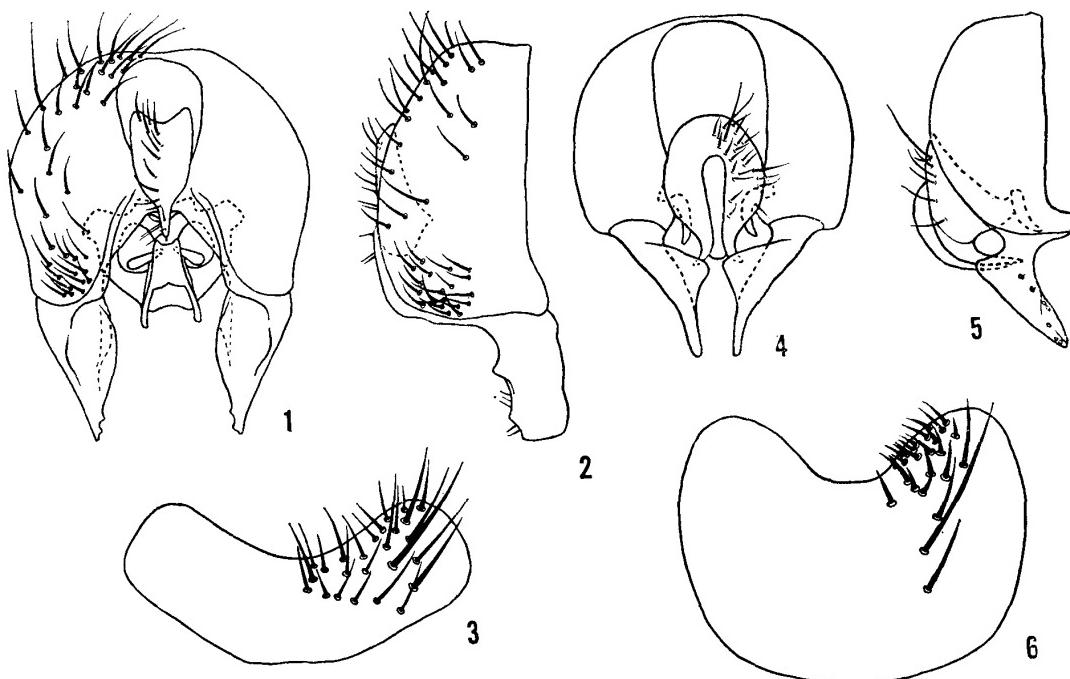
**Legs:** All the coxae, femora and tibiae reddish yellow, but apical part of femur with a dorsal brownish spot; all the tarsi black, but joint of each segment reddish brown. Fore femur with strong *pv*; on anteroventral surface with a row of erect setulae. Fore tibia with 1 *ad*. Mid femur with an incomplete row of *a*, 3 of them short but strong preapically; *av* short, uniserial

median and two narrow lateral brown vittae and closely situated on basal two-thirds, and becoming irregularly biserial and more crowded apicad; with 3-4 strong preapical *p*; *pv* long and uniserial on basal third, and becoming biserial, and then short and close-set setae in a preapical comb; ventral surface with a numerous short setulae pluriserial. Mid tibia with a ventral mat of erect and dense hairs; with 1 *ad* and 1 *pd*. Hind coxa with 1 or 2 hairs on inner posterior margin. Hind femur with short *av*, *v* and *pv*, and forming a pluriserial ventral covering, apical half with several strong *av* and *pv*, only one *av* at apical third distinctly longer. Hind tibia with no *av*, 1 *ad*, no *pd*, 1 *d* and 1 preapical *d*.

**Abdomen:** Second, 3rd and 5th tergites reddish yellow, but 3rd and 5th tergites each with a median black stripe and black margin. Fourth tergite entirely darkened. All the sternites reddish yellow. Cercal plate slender, producing an apical tip. Surstyli strongly sclerotized, wide in lateral aspect. Fifth sternite about 2.5 times as wide as long, with many setae on the disc (Figs. 1-3).

**Female** Unknown.

**Length:** ♂: 5.1-5.3 mm.



Figs. 1-3. *Piezura nigrigenus* sp. nov. (Paratype): 1. Hypopygium, caudo-ventral aspect; 2. ditto, lateral aspect; 3. 5th sternite.

Figs. 4-6. *Fannia japonica amamiensis* subsp. nov. (Paratype): 4. Hypopygium, caudo-ventral aspect; 5. ditto, lateral aspect; 6. 5th sternite.

*Holotype* : 1♂, Mt. Funagata, Miyagi, Japan, 31 Jun. 1971 (S. Shinonaga); *Paratype* : 1♂, same data as holotype. Specimens including holotype are preserved in the National Science Museum, Tokyo.

*Distribution* : Japan (Honshū).

*Remarks* : The present new species is more closely allied to the Nearctic *Piezura nearctica* than to the Palaearctic *P. graminicola*.

*P. graminicola* is distinguished from this new species by the following respects: third antennal segment reddish yellow on basal half; hind tibia with 1 *av*, 2 *ad*, and 2 *pd*; fourth tergite not entirely black; surstyli wider in lateral aspect, and with wide expansion on the ventral ridge.

*P. nearctica* is distinguished from the present species by the following respects: *acr* quadriserial; abdomen yellowish except for dark lateral margin; hind tibia with 2 *ad*; cercal plate weakly bifurcate; surstyli triangulated in lateral aspect; fifth sternite strongly concaved on posterior margin.

### *Fannia japonica amamiensis* subsp. nov.

(Japanese name : Amami-hime-iebae)

This subspecies was found from Amami-Ōshima Is. This is very similar to *F. japonica japonica*, but distinguished from the latter by the following respects.

Pollen on dorsum darker. Halteres and squamae more brownish. *Ad* on hind tibia shorter. Mid femur with the shorter *av* on basal half. Second, 3rd and 4th sternites and tergites with longer, denser setae and setulae. Surstylus with slightly less developed expansion. Spinose projection of cercal plate narrowly separated at the base, and median button narrow. Cercal plate rounded on posterior part (Figs. 4-6).

These differentiations of external characters are not so large and not so important that this form should not be treated as new species. But, hypopygium of this form somewhat differs from that of *F. japonica japonica*, and the variation within this form can be hardly found. As in general hypopygium of *Fannia* shows less individual variation, the genitalic structure is very valuable criterion of classification. There-

fore this form should be treated as subspecies of *F. japonica japonica*. Hitherto *F. japonica amamiensis* subsp. nov. was only found from Amami-Ōshima Is. On the other hand *F. japonica japonica* occurs in Japan north of the Yakushima Is., namely Yakushima Is., Kyūshū, Tsushima Is., Honshū, Hokkaidō and Rishiri Is.

**Female** Unknown.

*Length* : ♂ : 4.7-5.2 mm.

*Distribution* : Amami-Ōshima Is.

*Holotype* : 1♂, Mt. Yui-dake, Setouchi, Amami-Ōshima, Kagoshima, Japan, 14 Dec. 1971 (H. Suzuki); *Paratypes* : 5♂♂, same data as holotype. Specimens are preserved in the National Science Museum, Tokyo.

### *Platycoenosia mikii* Strobl, 1894

(Japanese name : Usu-hara-bae)

*Platycoenosia mikii* Strobl, 1894, Wien. Ent. Zeitg. 13 : 72.

*Choristomma pokornyi* Stein, 1895, Berl. Ent. Zeitsch. 40 : 138.

*Coenosia externa* Pandellé, 1899, Rev. Ent. France, 18 Musc., 152.

*Type locality and type* : Seitenstetten, Germany. Location of type unknown.

#### **Male**

*Head* : Eye about 1.7 times as deep as long. Frons about equal to width of an eye. Parafrontalia brownish gray pollinose, one-third as broad as long, separated by the broad frontal vitta. Three strong and 3 or 4 weak frontal setae present. Frontal vitta brownish gray pollinose, ground color yellow marginally and yellowish brown medially. One upper orbita and one lower orbita present. Parafrontal setae uniserial. Parafacilia silvery gray pollinose, ground color reddish yellow, setulose. Occipital setae long and strong, regular in length. Postoccipital setae absent. First and 2nd antennal segments and the base of 3rd antennal segment reddish yellow, and the other part very dark brown; 3rd antennal segment twice as long as wide. Arista brown; long-plumose, hairs as long as width of third antennal segment. Palpi and theca brownish yellow, theca pollinose; palpi filiform and compressed laterally.

*Thorax* : Brownish gray pollinose, with

three faint brownish vittae along the *dc* and *acr* rows. *Acr* triserial, median row incomplete. *Pra* one, weak but distinct. Accessory setulae on dorsum sparsely present. *Stpl* 1+1+1. Propleuron bare, 2 setae on ridge beneath. Prostigmatal setae 2. Scutellum yellow marginally, and the other part black. One pair of strong apicals and laterals present.

**Legs:** Yellow, but all the tarsi black. Fore femur with a row of *pv*, the setae on basal half weak. Fore tibia with 1 *ad* and 1 preapical *d*. Mid femur with an incomplete row of *a*, preapical 2 or 3 stronger; uniserial *av* on basal two-thirds, and crowded and becoming shorter apicad to form a comb; *pv* uniserial on basal half, and then becoming stronger and pluriserial. Mid tibia with 1 *ad* and 1 *pd*; with a ventral mat of short and dense hairs. Hind coxa with 2 setulae on inner posterior margin. Hind femur with a row of *av*, 3 or 4 strong setae on apical third; setulose on ventral surface. Hind tibia with 1 *av*, 2 *ad*, 1 *d*, 1 preapical *d* and a few suberect *pd*.

**Wings:** Clear. Veins of wing yellow. Squamae whitish, with faintly yellow fringe; lower one well developed. Halteres yellow.

**Abdomen:** Second tergite reddish yellow; 3rd, 4th and 5th tergites trimaculated.

**Female** Head and thorax as in male.

**Legs:** Mid femur with a row of very weak *av*, and with a row of weak *pv*. Mid tibia without ventral mat of hairs.

**Abdomen:** Ground color reddish yellow, but 3rd tergite with dark spots marginally. Each tergite non-vittate.

**Length:** ♂: about 5.2 mm. ♀: about 4.9 mm.

**Records:** 1♀, Mt. Hayachine, Iwate, 17 Jun. 1971 (S. Shinonaga); 1♂, Mt. Funagata, Miyagi, 21 Jun. 1971 (S. Shinonaga).

**Distribution:** Japan (Honshû), Germany, the coast of Baltic Sea, France, Austria, Hungary, Corsica, Dorpat, and North America.

#### ACKNOWLEDGEMENT

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#### REFERENCES

- Chillcott, J. G. (1961) : A revision of the Nearctic species of Fanniinae (Diptera: Muscidae). *Canad. Ent.* 92., suppl. 14 : 5-295, 289 figs., 61 maps, 1 table.  
 Hennig, W. (1955-1964) : Muscidae, in Lindner, Die Fliegen der palaearktischen Region, Stuttgart, 63b : 1-1110. 429 figs., 33 plates.  
 Nishida, K. (1974) : Studies on the species of Fanniinae (Diptera: Muscidae) from Japan. I. One new and three newly recorded species of the genus *Fannia*. *Jap. J. Sanit. Zool.*, 25 : 119-123.

#### 摘要

日本産ヒメイエバエ亜科に関する研究. III.  
 ハナイエバエ属の1新種, ヒメイエバエ属の1新亜種, ウスハラバエ属の1日本未記録種について

ハナイエバエ属(新称)(Genus *Piezura*)の1新種を記載した。この属にはすでに2種が知られ、ヨーロッパと北アメリカよりそれぞれ記載されているが、本種は北アメリカ産の *Piezura nearctica* に近い。

また、ヒメイエバエ属(新称)(Genus *Fannia*)の1新亜種アマミヒメイエバエ(新称)を記載した。これはヤマトヒメイエバエ(*F. japonica*)の亜種で、これまで奄美大島からのみ採集され、一方ヤマトヒメイエバエは屋久島以北の日本各地で採集される。

日本未記録のウスハラバエ(新称)(*Platycoenosia mikii*)が、宮城県および岩手県より採集されたので報告した。